

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A crucible comprising:
a base container to contain liquid silicon material;
a coating layer covering at least a portion of the base container, wherein the coating layer includes boron nitride[.]; and
wherein the base container includes multiple components.
2. (Original) The crucible of claim 1, wherein the base container includes a material having a coefficient of thermal expansion less than silicon.
3. (Original) The crucible of claim 1, wherein the base container includes graphite.
4. (Currently Amended) The crucible of claim 1, wherein the base container ~~is integrally formed~~ includes silicon dioxide.
5. (Currently Amended) The crucible of claim 1, ~~wherein the base container includes multiple components~~ 3, wherein a central axis of the base container is oriented substantially perpendicular to an orientation of graphite grains.
6. (Original) The crucible of claim 1, wherein the coating layer further includes silicon nitride.
7. (Original) The crucible of claim 6, wherein the coating layer includes a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride.
8. (Currently Amended) An ingot system, comprising:
a furnace;

a crucible, including:

a base container to contain liquid silicon material;

a coating layer covering at least a portion of the base container, wherein the coating layer includes ~~boron nitride~~ a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride; and

a cooling system to extract heat from the crucible.

9. (Original) The ingot system of claim 8, wherein the cooling system includes a directional solidification cooling system.

10. (Original) The ingot system of claim 8, further including a control gas system.

11. (Original) The ingot system of claim 8, wherein the base container includes graphite.

12. (Original) The ingot system of claim 8, wherein the base container includes silicon dioxide.

13 – 27. (Cancelled)

28. (New) The ingot system of claim 9, wherein the directional solidification cooling system includes a cooling system to conduct heat from a bottom of the crucible preferentially.

29. (New) A crucible comprising:

a base container to contain liquid silicon material;

a coating layer covering at least a portion of the base container, wherein the coating layer includes boron nitride; and

wherein the coating layer includes a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride.

30. (New) The crucible of claim 29, wherein the base container includes graphite.

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31. (New) The crucible of claim 30, wherein a central axis of the base container is oriented substantially perpendicular to an orientation of graphite grains.
32. (New) The crucible of claim 29, wherein the base container is integrally formed.
33. (New) The crucible of claim 29, wherein the base container includes multiple components.
34. (New) The crucible of claim 29, wherein the base container includes quartz.
35. (New) An ingot system, comprising:
- a furnace;
 - a crucible, including:
 - a base container to contain liquid silicon material;
 - a coating layer covering at least a portion of the base container, wherein the coating layer includes boron nitride; and
 - a cooling system to extract heat from the crucible including a directional solidification cooling system.
36. (New) The ingot system of claim 35, wherein the directional solidification cooling system includes a cooling system to conduct heat from a bottom of the crucible preferentially.
37. (New) The ingot system of claim 35, wherein the base container includes graphite.
38. (New) The ingot system of claim 35, wherein the base container includes quartz.
39. (New) The ingot system of claim 35, wherein the coating layer includes a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride.